

AN AMERICAN SPECIES OF CYMATIA (CORIXIDÆ, HEMIPTERA).

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While collecting waterbugs at a small pond near St. Paul, Minnesota, in the fall of 1918, I observed numerous individuals of a Corixid species which was notably distinct from all the other species of the family with which it was associated. On each of my visits to this pond I found this form to be one of the most abundant waterbugs in the habitat; and in January, 1919, I found large numbers of this species hibernating in groups of from ten to fifty individuals in air-pockets in the ice which covered the pond. This remarkable mode of hibernation is being investigated, and will be discussed in a future paper. The species was much less abundant, however, during the next fall and winter: less than a dozen individuals were found between October, 1919, and January, 1920.

The pond from which these Corixids were taken is small, less than 100 yards in diameter, and not very deep. The bottom is soft and mucky, and there is very little aquatic vegetation, at least in the parts where most of the collecting was done.

I have also found this species among some Corixids from North Dakota, which were sent to me recently from the Museum of Zoölogy of the University of Michigan. These bugs were taken quite fortuitously by Miss Crystal Thompson from among the aquatic vegetation at Fort Totten Lake, while she was making Birge-net collections of Crustacea under the direction of Professor R. T. Young at the North Dakota Biological Station. Through Mr. F. M. Gaige of the University of Michigan Museum, Miss Thompson has kindly furnished me some data concerning the habitat.

Fort Totten Lake is a shallow, weedy body of water, less than a quarter of a mile in diameter, located about a mile and a half from Devil's Lake. It is the only body of fresh water within a radius of five or six miles. The bottom is rather firm and sandy, with considerable debris, and there is a rather plentiful growth of *Chara*, *Ceratophyllum*, etc. The lake has neither inlet nor outlet.

Meanwhile, study of the Minnesota specimens had shown that the Corixid in question was an undescribed species of the genus *Cymatia*—a conclusion which has kindly been verified by my friend Mr. J. R. de la Torre-Bueno.

Cymatia was proposed by Flor in 1860 (*Rhynch. Livl.*, i, pp. 783, 799) as a subgenus of *Corixa*, to include *Sigara coleoptrata* Fabr. and *Corixa bonsdorffi* C. R. Sahlberg, both of which are widely distributed in the Palæarctic region. Two other species have since been described from the Old World, but until now the genus has not been recorded in America—indeed, the present species is the first one known outside the Palæarctic region. The genus may be characterized as follows.

Head, together with the eyes, broader than the pronotum; eyes more widely removed from the hind margin of the head than in *Corixa*, *Arctocorisa*, etc. Vertex horizontal, tumidly projecting between the eyes, and forming a sharp angle (best seen from the side) with the frons; vertex with a more or less distinct carina, and with a shallow depression each side behind the middle. Frons slightly concave in males, flat in females. Clypeus smooth. Pronotum broader than long, the anterior half, at least, with a median carina. Scutellum concealed by pronotum. Body broadest behind the middle. *Pala* subcylindrical, a little curved inwardly, at least five times as long as it is thick, $2\frac{1}{2}$ to 3 times as long as the tibia, to which it is closely united; *pala* with a single apical spine or claw which is at least one third as long as the *pala* itself, and with two rows of very long bristles; *pala* without stridular pegs. Fore femur without stridular area. Asymmetry of abdominal segments of male dextral; strigil absent.

Through the kindness of Mr. Bueno, I have been able to examine specimens of the three European species. I have not seen *Cymatia jaxartensis* Kiritschenko, which was described from Turkestan (*Rev. Russe Ent.*, xi, 1911, p. 92), nor do I have access to its description at present. The four species known to me may be separated as follows:

1. Head shorter than the pronotum, which is about three fourths as long as it is wide; pronotum with fine reticulate markings similar to those of the hemelytra (southeastern Europe) *C. rogenhoferi* Fieb.

- Head longer than the pronotum, which is not more than one half as long as it is wide; pronotum concolorous. . . 2
2. Head about three times as long as the pronotum, which is four times as wide as it is long; hemelytral markings confluent in longitudinal bands; hind wings absent (all Europe) *C. coleoptrata* Fab.
- Head very slightly longer than the pronotum, which is about twice as wide as it is long; hemelytral markings not confluent; hind wings present. 3
3. Size smaller, length about 6 mm. (all Europe).
C. bonstdorffi Sahlbg.
- Size larger, length 7.5 to 8.3 mm.; American species (Minnesota and Dakota) *C. americana* n. sp.

Cymatia americana, n. sp.

Near *C. bonstdorffi* Sahlbg., but differing as stated above. General color above dark olive-green in living individuals, marked with black; in pinned specimens the green rapidly fades to yellowish brown. Length 7.4–8.3 mm.; width of pronotum 2.0–2.5 mm.; width across hemelytra 2.6–3.0 mm.

Head green, broadly infuscated behind, and with two large brown spots on the hind margin of the vertex; head slightly longer than the pronotum and about twice as wide as it is long. Inner margins of the eyes straight, diverging anteriorly; synthlipsis one fifth to one fourth narrower than the anterior margin of the vertex; vertex with several concolorous punctures anteriorly. Front coarsely punctured each side, and with long whitish pubescence which is erect in living specimens.

Pronotum subshining, about twice as wide as it is long, dark olive-green to olive-brown in life, the margin narrowly blackish, the lateral submargin very lightly impressed. Median keel becoming obsolete on the posterior third of the disk; anterior margin of pronotum lightly emarginate, posterior margin very slightly sinuate. Disk of pronotum with several very fine transverse scratch-like impressions, interrupted by the median keel, sometimes absent. Pronotum very minutely rastrate (it requires a compound microscope to resolve the rastrations).

Hemelytra olive-green, marked with black. Clavus rastrate-rugulose, with oblique black lineations which are usually heaviest near its base; the lines somewhat forked and broken, not reaching the inner angle, more irregular and sometimes confluent on the apical part. Corium sparsely and irregularly punctate with black, and with numerous irregular blackish maculae which are commonly heaviest near the apex of the clavus and which tend to form two or three indefinite longitudinal series. Embolium whitish, externally margined with

